10. (Amended) A preset information setting system comprising:

an optical device; and

an information write device set outside said optical device and connected to said optical device,

wherein said optical device includes an optical member, drive means for driving said optical member, storage means for storing first preset information which is written by said information write device and relates to driving of said optical member, storage operation setting means operated to store second preset information into said storage means, and control means for controlling said drive means, and

wherein said control means selects one of the first preset information and the second preset information stored in said storage means, and performs preset drive control of said drive means on the basis of the selected first preset information or second preset information.

REMARKS

Claims 1 through 15 are now presented for examination. Claims 11 through 15 have been cancelled without prejudice or disclaimer of subject matter. Claims 1 through 10 have been amended to define still more clearly what Applicants regard as their invention, in terms which distinguish over the art of record. Claims 1 and 10 are the only independent claims.

The specification and the abstract have been carefully reviewed and amended as to matters of form. The specification has been amended to improve idiomatic English.

Claims 1 to 15 have been rejected under 35 U.S.C. § 112, second paragraph, as indefinite in that the claims are not clear as to what claimed elements are part of the claimed optical device.

Claim 1 has been amended to recite that the optical device thereof specifically includes an optical member, drive means for driving said optical member, storage means for storing preset information which is written by said information write device and relates to driving of said optical member, and control means for controlling said drive means. Claim 10 has been amended to recite that the optical device thereof includes an optical member, drive means for driving said optical member, storage means for storing first preset information which is written by said information write device and relates to driving of said optical member, storage operation setting means operated to store second preset information into said storage means, and store second preset information into said storage means, and control means for controlling said drive means.

In view of the foregoing, it is believed that Claims 1 through 10 as amended fully meet the requirements of 35 U.S.C. § 112, second paragraph.

Claims 1 to 15 have been rejected under 35 U.S.C. § 102(b), as anticipated by U.S. Patent No. 4,423,934 (Lambeth). With regard to the claims as amended, this rejection is respectfully traversed.

Independent Claim 1 as amended is directed to a preset information setting system in which an information write device set outside of and is connected to the optical device. The optical device includes an optical member, a drive unit that drives the optical member, a storage unit that stores preset information which is written by the information write device and relates to driving of said optical member, and a control unit that controls the drive unit. The control unit performs preset drive control of the drive unit on the basis of the preset information stored in the storage unit.

In Applicants' view, Lambeth et al. relates to a digital controller in a photographic camera that has a microcomputer and one or more digital computer controlled input and output transducers such as a scene light measuring unit, a subject distance measuring unit and units that control aperture size, shutter time, or focus adjustment. The microcomputer receives inputs from the input transducers and controls the output transducers in response thereto according to a control program stored in a computer memory. The controller includes a programable memory containing custom control constants to custom tailor the operating program for the specific apparatus in which it resides. In one arrangement, a high precision photographic camera is produced by first making the photographic camera, then operating the camera under known operating conditions using a nominal control program. The responses of the output transducers under the known operating conditions are measured and custom tailored control constants are generated for the camera. The custom tailored control constants are then programed into the programable memory to bring the operation of the camera into conformity with desired parameters to complete the manufacture of the camera.

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According to the invention of Claim 1 as amended, an information write device is connected to an optical device which stores preset information written by the information write device that relates to driving of the optical member. A control unit in the optical device performs drive control on the basis of the stored preset information. Advantageously, preset information such as preset position, preset speed, or preset direction for optical device operation can be set at any time by a user via the outside information write device from a remote location.

Lambeth et al. may disclose an arrangement that at time of manufacture operates the just manufactured camera from an external computer to determine a set of control constants under controlled conditions that calibrate the camera transducers. These control constants are stored in a programable memory that is outside the camera. As a result, Lambeth et al. only provides a single set of control constants automatically determined by an initial camera operation and stored in a programable memory external to the camera. After the programable memory is installed in the camera, no further changes can be made to the control constants by a user.

In contrast to Lambeth et al.'s single set of control constants provided to a programable memory prior to insertion in a camera for calibrating camera parameters, it is a feature of Claim 1 as amended that an information write device set outside an optical device writes preset information for drive control to a storage unit in the optical device and preset drive control is performed based on the stored preset information so that the camera operation can be changed by a user from a remote location. Lambeth et al. only teaches a

one time setting of camera parameters at time of manufacture which is completely different than the setting of operation drive information each time of use by a user as in Claim 1.

It is not seen that Lambeth et al.'s calibration of camera parameters on manufacture and one time storing of control constants related thereto prior to insertion of the stored control constants in the camera could possibly teach or suggest writing preset drive control information from an information write device to a storage unit in an optical device for drive control as in Claim 1. It is therefore believed that Claim 1 as amended is completely distinguished from Lambeth et al. and is allowable.

Independent Claim 10 as amended is directed to a preset information setting system in which an information write device is set outside and is connected to the optical device. The optical device includes an optical member, a drive unit that drives the optical member, a storage unit that stores first preset information written by the information write device and relates to driving of the optical member, a storage operation setting unit that operates to store second preset information into the storage unit, and a control that controls the drive unit. The control unit selects one of the first preset information and the second preset information stored in the storage unit and performs preset drive control of the drive unit on the basis of the selected first preset information or the second preset information.

It is one feature of Claim 10 as amended that first preset information relating to driving an optical member of an optical device is written to a storage unit of the optical device from an information write device set outside an optical device and that the optical device storage unit stores second preset information. It is a further feature of Claim 10 as amended that one of the stored first preset information and the second preset

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information is selected and that drive control is performed on the basis of the selected first preset information or the second preset stored information. Advantageously, a user may select different operating parameters.

As discussed with respect to Claim 1, Lambeth et al. only teaches storing a single set of control constants for calibrating camera parameters at time of manufacture in a programable memory outside the camera and then inserting the programable memory in the camera without any provision for further change of the control constants. In contrast to Lambeth et al., it is a feature of Claim 10 that an information write device set outside of and connected to an optical device writes first preset information related to drive control of an optical member of the optical device into a storage unit of the optical device for use in drive control of the optical device. Lambeth et al.'s one time insertion of a programable memory with control constants fails in any manner to suggest this feature of Claim 10.

Further, Lambeth et al. is devoid of any suggestion of both first preset information for drive control written from an outside information write device and second preset information being stored in the storage unit of the optical device and selection of one of the first preset information and the second preset information as in Claim 10. In at least the foregoing respects, it is believed that Claim 10 as amended is completely distinguished from Lambeth et al. and is allowable.
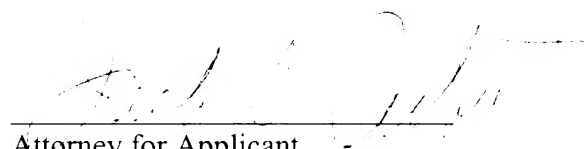
A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' attorney, C. Phillip Wrist, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES
MADE TO THE SPECIFICATION

The paragraph starting at page 1, line 18 and ending at page 1, line 27 has

been amended as follows:

First, a zoom lens is moved to a predetermined zoom position at a high

speed during photographing operation, and photographing operation restarts from this

position. This photographing method is implemented [by] using a function of storing an

arbitrary zoom position as a preset position in advance and turning on a switch during a

photographing operation to move the zoom lens to the preset position at the maximum

driving speed drivable by the lens device. This function will be referred to as a fast

position preset zoom hereinafter.

The paragraph starting at page 2, line 1 and ending at page 2, line 11 has

been amended as follows:

Second, a photographing operation is performed while the zoom lens is

moved at a predetermined zoom ratio and a predetermined constant speed. This

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photographing method is achieved [by] <u>using</u> a function of storing an arbitrary zoom

position as a preset position in advance, storing an arbitrary zoom lens driving speed as a

preset speed, and turning on a switch during <u>a</u> photographing operation to move the zoom

lens to the preset position at the preset speed. This function will be referred to as a memory

position preset zoom hereinafter.

The paragraph starting at page 2, line 12 and ending at page 2, line 21 has

been amended as follows:

Third, <u>a</u> photographing operation is performed while the zoom lens is

moved at a predetermined speed. This photographing method is realized [by] <u>using</u> a

function of storing an arbitrary zoom lens driving direction as a preset direction in advance,

storing an arbitrary zoom lens driving speed as a preset speed, and turning on a

switch during <u>a</u> photographing operation to move the zoom lens in the preset direction at

the preset speed. This function will be referred to as a speed preset zoom hereinafter.

The paragraph starting at page 2, line 22 and ending at page 3, line 8 has

been amended as follows:

Fourth, the zoom position is changed while an object is photographed at a given zoom position, and then the zoom position is returned to an original one to continue photographing operation. This photographing method is attained [by] using a function of storing an arbitrary zoom position as a preset position in advance, turning on a switch to store the zoom position at the switch-on timing, driving the zoom lens to the preset position, enabling a photographing operation, then turning off the switch to drive the zoom lens to the zoom position stored at the switch-on timing, and enabling a photographing operation. This function will be referred to as a shuttle zoom hereinafter.

The paragraph starting at page 3, line 9 and ending at page 3, line 17 has been amended as follows:

The preset position and preset speed which must be stored [in] for each function are set by, e.g., the variable resistor of the lens device for each function. As some of recent functions, a zoom position, speed, or direction in actually driving a zoom lens is detected, and detection information obtained at the operation timing of a switch for designating storage is stored as a preset position, preset speed, or preset direction in a semiconductor memory or the like.

The paragraph starting at page 18, line 3 and ending at page 18, line 12 has been amended as follows:

Setting of a preset position for "fast position preset zoom " will be described. To set a preset position, the user drives the zoom lens optical system 7 to a position he/she wants to preset in advance by manipulating the zoom control switch 1, and during the on state of the memory switch 23, changes the state of fast position preset zoom switch 19 from "OFF " to" ON" . The CPU 6 stores the position of the zoom lens optical system 7 as a preset position in the CPU preset information memory 28.

The paragraph starting at page 18, line 13 and ending at page 18, line 23 has been amended as follows:

Setting of a preset position for "memory position preset zoom" will be described. To set a preset position, similar to "fast position preset zoom", the user drives the zoom lens optical system 7 to a position he/she wants to preset in advance by manipulating the zoom control switch 1, and during the on state of the memory switch 23, changes the state of memory position preset zoom switch 20 from "OFF" to "ON". The CPU 6 stores the position of the zoom lens optical system 7 as a preset position in the CPU preset information memory 28.

The paragraph starting at page 29, line 9 and ending at page 29, line 21 has been amended as follows:

When there [are] is preset information stored in the memory 18 via the external write device 27, and preset information stored in the CPU preset information memory 28 of the TV lens 100 by using the zoom control switch 1, fast position preset zoom switch 19, memory position preset zoom switch 20, speed preset zoom switch 21, shuttle zoom switch 22, and memory switch 23, preset driving control using the preset information in the CPU preset information memory 28 can be performed by turning on the preset information selector switch 24 by the user, and preset driving control using the preset information in the memory 18 can be performed by keeping the preset information selector switch 24 off.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

1. (Amended) [An optical device] A preset information setting system comprising:

an optical [member] device; and

[driving means for driving said optical member;

storage means for storing preset information about driving of said optical member;]

an information write device [for writing the preset information in said storage means from] set outside [of] said optical device and connected to said optical device[; and

control means for performing driving control of said driving means, wherein said control means performs preset driving control of said driving means],

wherein said optical device includes an optical member, drive means for driving said optical member, storage means for storing preset information which is written by said information write device and relates to driving of said optical member, and control means for controlling said drive means, and

wherein said control means performs preset drive control of said drive means on the basis of the preset information stored in said storage means.

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2. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device generates preset information of an arbitrary form, and

said optical device further comprises information conversion means for converting the preset information of the arbitrary form from said information write device into preset information of a form processible by said control means, said information conversion means storing the converted preset information of the processible form in said storage means.

3. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device generates, as preset information of an arbitrary form, relative position information representing a driving amount from a predetermined position in a movable range of said optical member, and

said optical device further comprises information conversion means for converting the relative position information from said information write device into preset information representing an actual driving position of said optical member, said information conversion means storing the converted preset information representing the actual driving position in said storage means.

4. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device generates focal length information as preset information of an arbitrary form, and

said optical device further comprises information conversion means for converting the focal length information from said information write device into preset information representing an actual driving position of said optical member, said information conversion means storing the converted preset information representing the actual driving position in said storage means.

5. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device generates, as preset information of an arbitrary form, driving time information representing a driving time taken from one end to the other end in a movable range of said optical member, and

said optical device further comprises information conversion means for converting the driving time information from said information write device into preset information representing an actual driving speed of said optical member, said information conversion means storing the converted preset information representing the actual driving speed in said storage means.

6. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device generates, as preset information of an arbitrary form, range driving time information representing a driving time in a driving range of the preset driving control, and

said optical device further comprises information conversion means for converting the range driving time information from said information write device into preset information representing a driving speed of said optical member, said information conversion means storing the converted preset information representing the driving speed in said storage means.

7. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device generates preset information of a form processible in the preset [driving] <u>drive</u> control, and stores the generated preset information in said storage means.

8. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said optical member includes a zoom lens optical system.

9. (Amended) A [device] <u>preset information setting system</u> according to claim 1, wherein said information write device includes a computer.

10. (Amended) [An optical device] <u>A preset information setting system</u>

comprising:

an optical [member] <u>device;</u>

[driving means for driving said optical member;] <u>and</u>

[storage means for storing preset information about driving of said

optical member;

storage operation setting means operated to store device-side preset

information in said storage means;]

an information write device [for writing external preset information

in said storage means from] <u>set</u> outside [of] said optical device <u>and connected to said</u>

<u>optical device</u>[;]<u>,</u>

[selection means for selecting either of the device-side preset

information and the external preset information that are stored in said storage means; and

control means for performing driving control of said driving means,

wherein said control means selects either of the device-side preset information and the

external preset information that are stored in said storage means in accordance with a

selection result of said selection means, and performs preset driving control of said driving

means on the basis of the selected preset information]

wherein said optical device includes an optical member, drive means for driving said optical member, storage means for storing first preset information which is written by said information write device and relates to driving of said optical member, storage operation setting means operated to store second preset information into said storage means, and control means for controlling said drive means, and

wherein said control means selects one of the first preset information and the second preset information stored in said storage means, and performs preset drive control of said drive means on the basis of the selected first preset information or second preset information.

Claims 11 through 15 have been cancelled.

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wherein said optical device includes an optical member, drive means for driving said optical member, storage means for storing first preset information which is written by said information write device and relates to driving of said optical member, storage operation setting means operated to store second preset information into said storage means, and control means for controlling said drive means, and

wherein said control means selects one of the first preset information and the second preset information stored in said storage means, and performs preset drive control of said drive means on the basis of the selected first preset information or the second preset information.

Claims 11 through 15 have been cancelled.

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